#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-017290 Address: 333 Burma Road **Date Inspected:** 09-Oct-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Mr. Tian Lei **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

#### **Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

#### BAY-2

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint FB3328-001-058. Welder is identified as 202122. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint FB3328-001-009. Welder is identified as 047866. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

FCAW of weld joint SA3409-001-017. Welder is identified as 067138. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4b-F.

BAY-3

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ZPMC Quality Control (QC) MT Technician was performing Magnetic Particle Testing (MT) for the Floor beam weld joints identified as FB3261-001-044 and 045. This QA Randomly witnessed the MT. During random witness of MT this QA observed ZPMC QC MT Technician found four(4)Transverse linear cracks on weld No:FB3261-001-044 and two (2) Transverse linear cracks on FB3261-001-045 measuring approximately 5 mm ~10 mm in length. This QA informed to ZPMC QC identified as Mr. Zhang Yaxu and American Bridge/Fluor (AB/F) QA Inspector Mr. Wang wen bin. Mr. Zhang Yaxu and Mr. Wang wen bin informed this QA that the Cracks would be corrected in a manner compliant with the contract documents. Refer the attached photos for further information.

BAY-4

Submerged Arc Welding (SAW) of weld joint SA3359-001-001. Welder is identified as 050502. ZPMC Quality Control (QC) is identified as Mr. Zhang Yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

SAW of weld joint SA3357-001-001. Welder is identified as 207288. ZPMC Quality Control (QC) is identified as Mr. Zhang Yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

BAY-7

FCAW of weld joint FB3244-002-053. Welder is identified as 204342. ZPMC Quality Control (QC) is identified as Mr. Xu hai yang. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

**BAY-8** 

FCAW of weld joint BK004A3-057-025,026. Welders are identified as 040706 and 500405. ZPMC Quality Control (QC) is identified as Mr. Liu Fa Wen. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06901.

Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Bike path weld Components. Total number of welds MT Tested: 14 No's. The weld designations are review as follows:

- 1. BK004A7-055-121~124,130,131,204~209
- 2. BK004A1-055-006
- 3. BK004A5-055-008

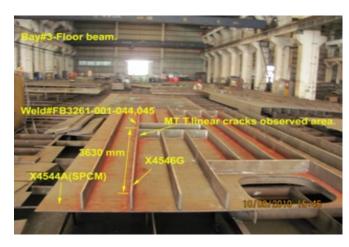
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

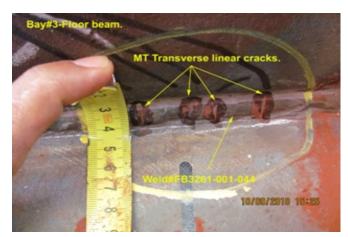
## WELDING INSPECTION REPORT

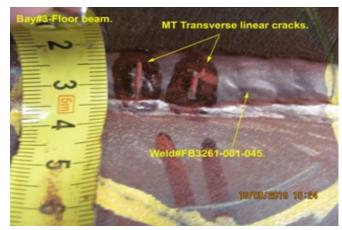
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documents.











## **Summary of Conversations:**

Only general conversation was held between QA and Quality Control (QC) concerning this project.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for

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your project.

Prabhu,Surendra **Inspected By:** Quality Assurance Inspector

**Reviewed By:** Hall,Steven QA Reviewer